We claim

~~CLAIMS~~

1. Latent heat body (1, 17, 20, 30, 39, 49, 50) having ~~paraffin-based~~ latent heat storage material (7, 7', 7", 54, 55) which is held in a carrier material (5) which has holding spaces, characterized in that capillary holding spaces (6) for the latent heat storage material (7, 7', 7", 54, 55) are formed inside the carrier material (5), and in that the carrier material (5) contains a mineral substance with an open capillary pore structure (8).

2. Latent heat body (1, 17, 20, 30, 39, 49, 50) according to claim 1 or in particular according thereto, characterized in that a gypsum material and/or a clay material and/or calcareous sandstone and/or siliceous earth is contained as mineral substance.

3. Latent heat body (1, 17, 20, 30, 39, 49, 50) according to ~~one or more of the preceding claims~~ claim 1 or in particular according thereto, characterized in that the carrier material (5) contains fiber elements (12).

4. Latent heat body (1, 17, 20, 30, 39, 49, 50) according to ~~one or more of the preceding claims~~ claim 1 or in particular according thereto, characterized in that the fiber elements (12) are disposed in a distributed manner in the carrier material.

5. Latent heat body (1, 17, 20, 30, 39, 49, 50) according to ~~one or more of the preceding claims~~ claim 1 or in particular according thereto, characterized in that the proportion by mass of the latent heat storage material (7, 7', 7", 54, 55), based on the total mass of the latent heat body (1, 17, 20, 30, 39, 49, 50), is from 5 to 50%, preferably 25% or further preferably 40 to 50%.

6. Latent heat body according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that a residual air volume (11), which absorbs temperature-dependent changes in volume of the latent heat storage material (7, 7', 7", 54, 55) of at most 10% of the latent heat storage material volume, is present in the capillary holding spaces (6).

7. Latent heat body according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the residual air volume (11) is uniformly distributed over the capillary holding spaces (6).

8. Latent heat body (1, 17, 20, 30, 39, 49, 50) according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the latent heat storage material (7, 7', 7", 54, 55) contains a thickening agent.

9. Latent heat body (1, 17, 20, 30, 39, 49, 50) according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the latent heat storage material (7, 7', 7", 54, 55) contains a proportion of mineral oils and polymers.

10. Latent heat body according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the latent heat body (1, 17, 20, 30, 39, 49, 50) has a sheath (40).

11. Latent heat body according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the sheath (40) consists of a film/foil material.

12. Latent heat body according to claim 1 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the sheath (40) is impermeable to latent heat storage material (7, 7', 7", 54, 55).

13. Latent heat body according to claim 1 ~~one or more of the preceding claims~~, or in particular according thereto, characterized in that the carrier material (5) is formed as a cohesive structure.

14. Latent heat body (1, 17, 20, 30, 39, 49, 50) according to claim 1 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the latent heat body (1, 17, 20, 30, 39, 49, 50) contains a number of latent heat part-bodies (19, 24), a latent heat part-body (19, 24) containing a carrier material part-body (21) and the latent heat storage material (7, 7', 7", 54, 55) which is present in the capillary holding spaces (6) contained therein and a residual air volume (11).

15. Latent heat body (1, 17, 20, 30, 39, 49, 50) according to claim 1 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the latent heat body (1, 17, 20, 30, 39, 49, 50) is of plate-like form.

16. Warming plate (26, 37) having a plate base body (27, 38) and having a receptacle (28) for foodstuffs (25), in particular for rice, which is formed thereon, characterized in that the plate base body (27, 38) contains a latent heat body (30, 39) according to claim 1 ~~one or more of claims 1 to 15~~ or in particular according thereto.

17. Warming plate according to claim 16 or in particular according thereto, characterized in that the

receptacle (28) has a recess which is integrated into a surface (31) of the plate base body (27, 38).

18. Floor heating (13), in particular electric floor heating, having a heating register (16) disposed between a bare floor (14) and a covering (15), characterized by a latent heat body (1, 17, 20, 30, 39, 49, 50) according to claim 1 ~~one or more of claims 1 to 15~~ or in particular according thereto.

19. Floor heating according to claim 18 or in particular according thereto, characterized in that the latent heat body (1, 17, 20, 30, 39, 49, 50) is formed in the manner of a slab and is disposed between the bare floor (14) and the heating register (16).

20. Floor heating according to claim 18 ~~one or more of claims 18 and 19~~ or in particular according thereto, characterized in that a thermally insulating layer is disposed on the top side of the bare floor (14).

21. Floor heating (13) according to claim 18 ~~one or more of claims 18~~ to 20 or in particular according thereto, characterized in that a first layer (18) with a latent heat body (20), which is formed from latent heat part-bodies (19), according to one or more of claims 1 to 15 or in particular according thereto, is disposed between the bare floor and the heating register (16).

22. Floor heating (13) according to claim 18 ~~one or more of claims 18 to 21~~ or in particular according thereto, characterized in that a second layer (23) with a latent heat body (25), which is formed from latent heat part-bodies (24), according to one or more of claims 1 to 15 or in particular according thereto, is disposed between the heating register (16) and the covering (15).

23. Floor heating (13) according to ~~one or more of claims 18 to 22~~ Claim 18 or in particular according thereto, characterized in that the latent heat part-bodies (19, 24) of the first (18) and/or second (23) layer are formed in the manner of granules.

24. Floor heating (13) according to ~~one or more of claims 18 to 23~~ Claim 18 or in particular according thereto, characterized in that a latent heat storage material (7') with a phase transition temperature which is different compared with the latent heat storage material (7") contained in the latent heat part-bodies (24) of the second layer (23) is contained in the latent heat part-bodies (19) of the first layer (18).

25. Floor heating (13) according to ~~one or more of claims 18 to 24~~ Claim 18 or in particular according thereto, characterized in that the phase transition temperature of the latent heat storage material (7') of the first layer (18) is higher than the phase transition temperature of the latent heat storage material (7") of the second layer (23).

26. Floor heating (13) according to ~~one or more of claims 18 to 25~~ Claim 18 or in particular according thereto, characterized in that the phase transition temperature of the latent heat storage material (7') of the first layer (18) is 52°C, and in that the phase transition temperature of the latent heat storage material (7") of the second layer (23) is 42°C.

27. Transport container (45) having an outer housing (46) and an inner housing (47) which is held therein spaced apart by a space, characterized in that a latent heat body (49, 50) according to ~~one or more of claims 1 to 15~~ Claim 1 or in particular according thereto is disposed in the space.

28. Transport container (45) according to claim 27 or in particular according thereto, characterized in that plate-like latent heat bodies (49, 50) according to one or more of claims 1 to 15 or in particular according thereto are held in the space, at least two latent heat bodies (49, 50) with different phase transition temperatures of the latent heat storage material (54, 55) respectively held therein being disposed adjacently in the direction perpendicular to the plate plane of the plate-like latent heat bodies (49, 50).

29. Method for producing a latent heat body (1, 17, 20, 30, 39, 49, 50) with ~~paraffin based~~ latent heat storage material (7, 7', 7", 54, 55) held in a carrier material (5) which has capillary holding spaces (6), characterized in that the latent heat storage material (7, 7', 7", 54, 55) is liquefied, in that the previously liquefied latent heat storage material (7, 7', 7", 54, 55) is conducted to automatically sucking, capillary-like holding spaces (6) of the carrier material (5), and in that a carrier material (5) which contains a mineral substance with an open, capillary pore structure (8) is used.

30. Method according to claim 29 or in particular according thereto, characterized in that fiber elements (12) are added to the mineral substance.

31. Method according to ~~one or more of claims 29 and 30~~ claim 29 or in particular according thereto, characterized in that the fiber elements are uniformly distributed in the mineral substance.

32. Method according to ~~one or more of claims 29 and 31~~ claim 29 or in particular according thereto, characterized in that a gypsum material and/or a clay

material and/or calcareous limestone and/or siliceous earth is used as mineral substance.

33. Method according to ~~one or more of claims 29 to 33~~ or in particular according thereto, characterized in that the previously liquefied latent heat storage material (7, 7', 7", 54, 55) is conducted at zero pressure to the automatically sucking, capillary-like holding spaces (6) of the carrier material (5).

34. Method according to ~~one or more of claims 29 to 33~~ or in particular according thereto, characterized in that the carrier material (5) is immersed in the previously liquefied latent heat storage material (7, 7', 7", 54, 55).

35. Method according to ~~one or more of claims 29 to 34~~ or in particular according thereto, characterized in that the temperature of the latent heat storage material (7, 7', 7", 54, 55), while it is being conducted to the automatically sucking, capillary-like holding spaces (6) of the carrier material (5), is regulated by the controlled supply and/or dissipation of heat.

36. Method according to ~~one or more of claims 29 to 35~~ or in particular according thereto, characterized in that a thickening agent and/or a proportion of mineral oils and polymers is added to the latent heat storage material (7, 7', 7", 54, 55).

37. Method according to ~~one or more of claims 29 to 36~~ or in particular according thereto, characterized in that a mass of the latent heat storage material (7, 7', 7", 54, 55) is conducted to the holding spaces (6) of the carrier material (5), which mass is between 5 and 50%, preferably 25% or further preferably 40 to 50%, of

the total mass of the latent heat body (1, 17, 20, 30, 39, 49, 50).

38. Method according to ~~one or more of claims 29 to 37~~ or in particular according thereto, characterized in that the carrier material, after it has been immersed in the previously liquefied latent heat storage material, is drip-dried and/or cooled.

39. Method according to ~~one or more of claims 29 to 38~~ or in particular according thereto, characterized in that the latent heat body (1, 17, 20, 30, 39, 49, 50) is provided with a sheath (40).

40. Latent heat body (1, 17, 20, 30, 39, 49, 50) according to one or more of the preceding claims or in particular according thereto, characterized in that the carrier material (5) together with the latent heat storage material (7, 7', 7", 54, 55) held therein in the capillary holding spaces (6) is surrounded by an embedding material.

41. Latent heat body having a carrier material and ~~paraffin-based~~ latent heat storage material held therein in capillary holding spaces, the latent heat body (58, 65, 69) containing a number of latent heat part-bodies (59) and a latent heat part-body (59) containing a carrier material part-body (61) and latent heat storage material (63) which is held therein in capillary holding spaces (62), characterized in that the number of latent heat part-bodies (59) together is surrounded by an embedding material (60, 66), and in that the carrier material contains wood fibers and/or cardboard and/or granulated siliceous earth and/or diatomaceous earth.

42. Latent heat body according to ~~one or more of the preceding claims~~ or in particular according

thereto, characterized in that a residual air volume (64), which absorbs temperature-dependent changes in volume of the latent heat storage material (63) of at most 10% of the latent heat storage material volume, is present in the capillary holding spaces (62).

43. Latent heat body according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the carrier material contains fiber elements, preferably in a uniform distribution.

44. Latent heat body according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the latent heat storage material (63) contains a thickening agent and/or a proportion of mineral oils and polymers.

45. Latent heat body according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the embedding material (60, 66) contains silicone, in particular silicone rubber, and/or resin and/or concrete.

46. Latent heat body according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the proportion of the embedding material (60, 66) in the sum of the individual masses of carrier material, latent heat storage material (63) and embedding material (60, 66) is at least approximately 50%.

47. Latent heat body according to ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the proportion of the latent heat storage material (63), based on the common mass of latent heat storage material (63) and carrier

material, lies between approximately 40 and approximately 80%, and is preferably approximately 60%.

48. Latent heat body according to ~~one or more of the preceding claims~~ claim or in particular according thereto, characterized in that a carrier material part-body (61) or a latent heat part-body (59) is overall of granular or fibrous structure, and in that a typical geometric dimension of a carrier material part-body (61) or of a latent heat part-body (59) is of the order of magnitude of a few millimeters to a few centimeters.

49. Latent heat body according to ~~one or more of the preceding claims~~ claim or in particular according thereto, characterized in that the latent heat body (65) contains a number of conglomerates (67), which are each formed from a number of carrier material part-bodies (61), in which latent heat storage material (63) is held and which together are surrounded by an embedding material (60, 66), and in that the conglomerates (67) together are incorporated in a matrix material (68).

50. Latent heat body according to ~~one or more of the preceding claims~~ claim or in particular according thereto, characterized in that the proportion of the matrix material (68) in the total mass of the latent heat body (65) is at least approximately 50%.

51. Latent heat body according to ~~one or more of the preceding claims~~ claim or in particular according thereto, characterized in that the matrix material (68) contains silicone, in particular silicone rubber, and/or resin and/or concrete.

52. Method according to ~~one or more of the preceding claims~~ claim 29 or in particular according thereto, characterized in that the carrier material which is

impregnated with latent heat storage material (63) is surrounded by an embedding material (60, 66).

53. Method according to claim 29 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the carrier material, which is impregnated with latent heat storage material (63), is comminuted to form latent heat part-bodies (59), a latent heat part-body (59) containing a carrier material part-body (61) and latent heat storage material (63) held therein.

54. Method according to claim 29 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that a number of latent heat part-bodies (59) together are surrounded by an embedding material (60, 66).

55. Method according to claim 29 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the latent heat body (58, 65, 69), before solidification of the embedding material (60, 66), is rolled out and/or cast into a mold.

56. Method according to claim 29 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that a conglomerate (67) is formed from a number of carrier material part-bodies (59) with latent heat storage material (63) held therein as a result of the common surrounding or embedding in the embedding material (60, 66), and in that a number of conglomerates (67) together is incorporated in a matrix material (68).

57. Method for producing a latent heat body with ~~paraffin-based~~ latent heat storage material held in a carrier material which has capillary holding spaces, the latent heat storage material being liquefied and

the previously liquefied latent heat storage material being conducted to automatically sucking, capillary-like holding spaces of the carrier material, characterized in that the carrier material which has been impregnated with latent heat storage material (63) is surrounded by an embedding material (60, 66), and in that a carrier material which contains wood fibers and/or cardboard and/or granulated siliceous earth and/or diatomaceous earth is used.

58. Method according to claim 57 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the carrier material, which has been impregnated with latent heat storage material (63), before it is surrounded with the embedding material, is comminuted into latent heat part-bodies (59), a latent heat part-body (59) being formed from a carrier material part-body (61) and latent heat storage material (63) which is held therein and in particular a residual air volume (64), and in that a plurality of latent heat part-bodies (59) together is surrounded, so as to form a cohesive unit with the embedding material (60, 66).

59. Method according to claim 57 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the embedding material (60, 66), while the carrier material which has been impregnated with latent heat storage material (63) is being surrounded therewith, is processed into a free-flowing and/or kneadable state.

60. Method according to claim 57 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the embedding material (60, 66), after surrounding of the carrier material impregnated with latent heat storage material (63), is solidified, in particular dried.

61. Method according to claim 57 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that the latent heat body (58, 65, 69), before solidification of the embedding material (60, 66), is rolled out and/or cast into a mold.

62. Method according to claim 57 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that a conglomerate (67) is formed from a number of carrier material part-bodies (59) with latent heat storage material (63) held therein by the common surrounding or embedding in the embedding material (60, 66), and in that a number of conglomerates (67) together is incorporated in a matrix material (68).

63. Method according to claim 57 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that concrete and/or silicone, in particular silicone rubber, and/or resin and/or concrete is used as embedding material (60, 66).

64. Method according to claim 57 ~~one or more of the preceding claims~~ or in particular according thereto, characterized in that concrete and/or silicone, in particular silicone rubber and/or resin and/or concrete is used as matrix material (68).